REMARKS

By this amendment, Applicants have amended claims 1-15 and have cancelled claims 16 and 17 without prejudice. These amendments are minor in character and clearly supported in all cases in the specification. New claims 18 and 19 have also been included and merely clarify the language found in original claims 9 and 11. Claims 1-15 and 18-19 are thus now presently under examination in the present application. Applicants submit that the present amendments place this application in condition for immediate allowance for at least the reasons set forth below.

As an initial matter, the Examiner had an objection to the specification with regard to the description of the drawings. However, since these drawings are described accurately in the present specification, it is not clear to Applicants what the objection is. To the extent the Examiner maintains this objection, Applicants request clarification as to what additional information is sought.

35 U.S.C. §112 Rejections

In the Official Action of October 16, 2007, the Examiner rejected claims 1-15 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In so far as applied to the claims as amended, this rejection is respectfully traversed for the reasons set forth below and should be withdrawn.

Specifically, with regard to claim 1, the Examiner's rejection of parts a), d) and the Examiner's first rejection of part e) have now been rendered moot by virtue of the present amendments. Part a) has been amended to indicate that the identification

means identifies the primary support; part d) has been amended to indicate that the identification means identifies the secondary support; and, part e) has been amended to refer to a binding interaction. With regard to the Examiner's second rejection to part e) of claim 1, however, Applicants respectfully disagree that "detecting the identification means" is unclear. Page 18, paragraph 3 to page 20, paragraph 3 of the present application describes a substrate-based reading system, and page 20, paragraph 4 to page 21, paragraph 1 describes a flow based reading system. If there is any difficulty in differentiating between bound and unbound primary and secondary supports, pre-detection sorting of the supports can be performed by the measuring means, as taught, for example, at page 21, line 2. Further, techniques for sorting particulates, such as flow cytometry and differential centrifugation, are standard and well known in the art. Thus, the skilled person seeking to implement the system of claim 1 would have no difficulty in "detecting the identification means" and, accordingly, there is no lack of clarity with regard to this phrase.

With regard to the further rejection of claim 1 as being "indefinite for being incomplete for omitting essential structural cooperative relationships of elements," this rejection is also respectfully traversed. The primary analyte corresponds to one "parameter" and the secondary analyte corresponds to another "parameter." As such, the claimed system allows combinations of these multiple parameters to be identified, and, accordingly, there is a "multiparameter analysis of the analytes." Thus, a clear structural cooperative relationship exists between the components of the claimed system and the rejection should be withdrawn.

With regard to the Examiner's separate rejections to claims 2-14, claim 9, claim 11, claim 12, and claim 14, these rejections have also been rendered moot by virtue of the present amendments. In particular, claims 2-14 have been amended to recite "The system..."; the term "such as" has been removed from claim 9 and 11; claim 12 has been amended to indicate that the primary and secondary supports are "present on only a portion of the surface of" their respective primary or secondary analyte; and, claim 14 has been amended to recite the term "comprises" instead of the term "includes," and to indicate that the liquid suspension is placed on a solid substrate.

Further, claim 14 has been amended to refer to a tertiary analyte that is capable of interacting with the at least one primary analyte. This tertiary analyte thus corresponds to another "parameter" that further contributes to "the multiparameter analysis of the analytes." As explained above, in relation to the Examiner's rejection of claim 1 for omitting essential structural cooperative relationships of elements, the claimed system allows combinations of these multiple parameters to be identified, and, therefore, there is a "multiparameter analysis of the analytes." Accordingly, the Examiner's similar rejection of claim 14 for omitting essential structural cooperative relationships of elements should be withdrawn.

With regard to claim 15, by these amendments, claim 15 has been amended to recite the term "comprising" and to indicate that the identification means identifies the primary or secondary support in steps a) and e), respectively. Further, step h) of claim 15 has also been amended to refer to a binding interaction. Accordingly, many of the rejections to claim 15 have been rendered moot by virtue of the present amendments and should be withdrawn.

With regard to the remaining rejections of claim 15, the Examiner has again asserted that the phrase "detecting the identification means" is unclear and, further, that claim 15 is indefinite for omitting essential structural and functional cooperative relationships of elements. As discussed above, in relation to claim 1, Applicants respectfully submit that numerous systems are described in the present application for detecting the identification means (see above discussion with regard to the similar rejection of claim 1) and that techniques of sorting particulates are standard and are well known to one skilled in the art. Further, as also discussed above, the analytes described and claimed in the system of the present application correspond to particular "parameters" and as such the claimed system allows combinations of these multiple parameters to be analyzed. Accordingly, there is a "multiparameter analysis of the analytes" and claim 15 is not indefinite for omitting essential structural and functional cooperative relationships of elements.

In light of the foregoing, it is thus submitted that the claims of the present application are not indefinite, and that the Examiner's rejection of claims 1-15 under 35 U.S.C. §112, second paragraph is respectfully traversed and should be withdrawn.

35 U.S.C. §102 Rejection

In the Official Action, the Examiner then rejected claims 1-9 and 11-15 under 35 U.S.C. §102(e) as being anticipated by Singh et al. (US 2002/0034827). In particular, the Examiner has asserted that the Singh reference discloses a system for multiparameter analysis of analytes that is comprised of primary supports having primary probes attached thereto and secondary supports having secondary probes

attached thereto. For the reasons set forth below, this rejection is respectfully traversed and should be withdrawn.

Contrary to the Examiner's assertions, the Singh reference does not teach secondary probes that are attached to secondary supports. The Singh reference describes a multiplexed extraction using encoded nanoparticles having primary probes attached thereto, which are then used to extract secondary probes. Singh, Fig. 1. The Examiner alleges that the secondary probes of the Singh reference are attached to "secondary supports," but this is incorrect. No "secondary supports" are shown in Fig. 1 of the Singh reference. Rather, the secondary probes are identified by fluorescent dye. See, e.g., Singh, paragraph 78 and Examples 7 and 8. Accordingly, the Singh reference does not teach or suggest secondary analytes that are attached to secondary supports, as described and claimed in the present application.

Further, independent claims 1 and 15 of the present application have now been amended to indicate that the primary support and secondary support are each an insoluble microparticle. Thus, although the primary probes found within the Singh reference are attached to nanoparticles, the secondary particles are not. As such, the claims of the present application are clearly not taught or suggested by the Singh reference, and the Examiner's rejection on the basis of this reference is respectfully traversed and should be withdrawn.

35 U.S.C. §103 Rejection

Finally, in the Official Action, the Examiner has rejected claim 10 under 35 U.S.C. §103(a) as being unpatentable over the Sing reference in view of Mandecki (U.S. Patent

No. 6,361,950). In particular, the Examiner has asserted that it would have been obvious to one of ordinary skill in the art to substitute the radio frequency identification transponder (RFID) of Mandecki in the multiplexed analytical system of Singh. For the reasons set forth below, this rejection is respectfully traversed and should be with withdrawn.

As discussed above, the Singh reference describes a multiplexed extraction using encoded nanoparticles with primary probes that are further used to extract secondary probes. However, the Singh reference does not teach or suggest attaching the secondary probes to secondary supports. Instead the Singh reference teaches away from using a secondary support by instead proposing that the secondary probes should be identified by the use of a fluorescent dye. Accordingly, claim 1 is not rendered obvious by the Singh reference, and as claim 10 is dependent on claim 1, and claim 1 is non-obvious in view of Singh, it is thus submitted that claim 10 is not obvious over the combination of the Singh and Mandecki reference.

In light of the amendments and arguments provided herewith, Applicants submit that the present application overcomes all prior rejections and objections, and has been placed in condition for allowance. Such action is respectfully requested.

Respectfully submitted,

Date: April 16, 2008

By: B. Aaron Schulman
Registration No.: 31,877

STITES & HARBISON PLLC • 1199 North Fairfax St. • Suite 900 • Alexandria, VA 22314
TEL: 703-739-4900 • FAX: 703-739-9577 • CUSTOMER NO. 000881